

**REMARKS**

The Applicants thank the Examiner for the thorough consideration given the present application. Claims 21-24, 26-33, and 36-38 are pending. Claims 25 and 35 are cancelled herein without prejudice to or disclaimer of the subject matter set forth therein. Claims 1-20 and 34 were previously cancelled. Claim 21 is amended, and claim 38 is added. Claim 21 is independent. The Examiner is respectfully requested to reconsider the rejections in view of the amendments and remarks set forth herein.

**Objection to the Claims**

Claims 28 and 29 are objected-to because of alleged informalities.

In response, the Applicants point out that the subject matter of independent claim 21 is a pressure-sensitive adhesive material or a sealing material that was produced by polymerization of a polymerizable mass. The polymerizable mass may contain a radiation-sensitive initiator, the amount of which and the initiators of which are specified in claims 28 and 29. The initiator starts the polymerization reaction when it is exposed to radiation. Upon exposure to radiation, the initiator disassociates to form a reactive entity. The Examiner's statement is correct in this regard. However, it can not be guaranteed that all initiator molecules that were incorporated into the polymerizable mass indeed do dissociate when the polymerization reaction is started. Hence, it may be that some residual initiator remains in the final product. This, however, does render the scope of the protection unclear, because independent claim 21 is a product by process claim, and the radiation-sensitive initiator may or

may not be present in the polymerizable mass. Independent claim 21 pertains to a pressure-sensitive adhesive material or sealing material, made of a polymerizable mass comprising at least one compound of those that are specified in independent claim 21. the radiation-sensitive initiator is an optional ingredient. Whether this ingredient is present in the polymerizable mass or not, and whether residual amounts of said initiator remain in the pressure-sensitive adhesive would not affect the pressure-sensitive adhesive as defined in independent claim 21.

Therefore, the Examiner is requested to withdraw the objection of claims 28 and 29.

**Rejection Under 35 U.S.C. § 112, second paragraph**

Claims 25 and 27 stand rejected under 35 U.S.C. § 112, second paragraph. This rejection is respectfully traversed.

The Applicants draw the Examiner's attention to page 6 of the instant specification, wherein the 2<sup>nd</sup> paragraph specifies that epoxide acrylates may either be monomeric or a polymeric compound, for instance the homopolymer glycidyl (meth)acrylate. It is further specified that the polymeric epoxide acrylate is admixed to the polyacrylate in order to cross-link the acrylate chains in a second step. Although being a polymer, the glycidyl (meth)acrylate is used as any monomeric compound would be employed for cross-linking the prefabricated polyacrylate chains. A monomer (from Greek *mono* "one" and *meros* "part") is a molecule of any of a class of mostly organic compounds that can react with and may become chemically bonded to other monomers to form very large molecules (polymers). The feature of monomer molecules is the ability to form chemical bonds with at least two other monomer

molecules (polyfunctionality). Those able to react with two others can form only chainlike polymers; those able to react with three or more can form cross-linked, network polymers.

In this regard, it appears that the homo polymeric glycidyl (meth)acrylate meets the definition of “monomer”, even if it is a molecule that was formed from monomers itself. The Examiner will note that the term “monomer” is not used in the claims.

In view of the definition of “monomer”, and without using the term “monomer” in the claims, it is the Applicants position that claims 25 and 27 are not in conflict with each other. Therefore, the Examiner is requested to withdraw the rejection of claim 27 under 35 U.S.C. § 112, second paragraph.

**Rejections Under 35 U.S.C. §102(b) and §103(a)**

Claims 21, 23,28, 30, 32, 33, and 35 stand rejected under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, 35 U.S.C. §103(a) as being unpatentable over Bonk et al. (U.S. 4,731, 273);

claims 21 and 22 stand rejected under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, 35 U.S.C. §103(a) as being unpatentable over Woods (U.S. 4,414,275);

claims 21, 24, 26, and 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Komiyama et al. (U.S. 5,118,567) in view of Woods;

claims 21, 25, and 31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Polski et al. (U.S. 5,599,601);and

claim 29 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bonk et al. in view of Lautenschlaeger et al. (U.S. 4,814,215).

These rejections are respectfully traversed.

While not conceding the appropriateness of the Examiner's rejections, but merely to advance prosecution of the instant application, independent claim 21 has been amended herein to recite a combination of elements directed to a pressure-sensitive adhesive material or a sealing material which has a three-dimensional structure and a defined cross-sectional contour, including *inter alia*

“wherein said material is present in a form of strings, strands or strips having a round, semicircular, oval, elliptical, triangular, quadrangular, polygonal or irregular cross-sectional contour”.

The Applicants respectfully submit that the combination of elements as set forth in independent claim 21 is not disclosed or made obvious by the prior art of record, including Bonk et al., Woods, Komiyama et al., Polski et al., and Lautenschlaeger et al.

Differences between the present invention as set forth in independent claim 21 and the references cited by the Examiner include at least the following:

**The Claim Rejection under 35 U.S.C. §102(b) or §103(a) in view of Bonk et al.**

Bonk et al. teach a heat-recoverable closure with cross-linked pressure sensitive adhesive. The cross-linked pressure-sensitive adhesive is present in form of layer that is adhered to the heat-recoverable sheet (col. 2, lines 47-55; Fig. 1 and 3).

Examiner points out that the layer of cross-linked pressure sensitive adhesive has a three-dimensional structure, because this layer has a specific length, a specific width, and a specific height. Regardless of how small the thickness of the layer may be, it always has a specific height. Thus, such a layer always has a three-dimensional structure.

The Applicants do not agree with the Examiner that the layer of cross-linked pressure-sensitive adhesive according to Bonk et al. has a defined semicircular cross-sectional contour. According to Bonk et al., the layer of cross-linked pressure-sensitive adhesive is adhered to a heat-recoverable sheet, and is flexible. As drawn in the Figures, the adhesive layer is shown in bended form to appear arched curved. However, the layer of cross-linked pressure-sensitive adhesive is not present as a semicircle, because the displayed arch is not a half of a circle. Moreover, the term “cross section” used in pending claim 21 refers to a plane or surface area. Hence, the cross-section of the arch of Bonk et al. does not comprise the plane of a semi circle.

In addition, it is the position of the Applicants that the layer of cross-linked pressure-sensitive adhesive according to Bonk et al. does not have a defined cross-sectional contour, because the adhesive layer is flexible to allow wrapping and securing the heat recoverable sheet around tubes of different diameter. This also means that the adhesive layer has a

rectangular cross-section if it is laid down on an even, non-bended surface, or has an irregular cross-section when placed on an uneven surface. Thus, the cross-section of the adhesive layer will change and hence can not be designated as “defined”, because the cross-sectional contour of the adhesive layer depends on the contour and structure of the surface the layer is adhered to or placed on. Therefore, the cross-sectional contour of an adhesive layer according to Bonk et al. is not consistent and not defined.

Thus, Bonk et al. do not teach a pressure-sensitive adhesive that has a defined cross-sectional contour.

In addition, Bonk et al. disclose that the pressure-sensitive adhesive is present as a layer or a tape. Thus, Bonk et al. teach that the cross-linked pressure-sensitive is a thin structure. In this regard, the Applicants submit that Bonk et al. merely teach that the adhesive tape may either be manufactured in that a polymerizable sirup is coated on a release liner, which is a flat adhesive film, or manufactured in that the reinforcing web is impregnated with the adhesive. Bank et al. neither disclose nor indicate that a cross-linked pressure-sensitive adhesive may be present in form of a string, strip or stripe having a shape other than a thin flat sheet or tape.

***The Claim Rejection under 35 U.S.C. §102(b) or §103(a) in view of Woods et al.***

Woods teaches a UV curable adhesive tape comprising a thermoplastic support film etched on one side with suitable etchant or etching method, said etched side being coated with a polyvinylformal pre-coat, and further coated with a photo-sensitive adhesive composition

comprising at least one polymerizable acrylate ester monomer. The other side of the thermoplastic support film is coated with a release agent.

Hence, Woods teaches that the acrylate ester-comprising adhesive is coating of a film. The coating has a three-dimensional structure for the same reasons as discussed hereinabove. However, the adhesive coating according to Woods neither has a defined cross-sectional contour for the same reasons that were set forth herein above in connection with discussing Bonk et al., nor that this cross-sectional contour may have any one of the shapes specified in claim 21. The same arguments as set forth against Bonk et al. apply to the teaching of Woods.

The disclosure of Woods only relates to adhesive films or tapes, but does not indicate that the adhesive is manufactured so as to be present in strings, stands or strips other than films.

***The Claim Rejection under 35 U.S.C. §103(a) in view of Komiyama et al. and Woods et al.***

Komiyama et al. merely teach an adhesive tape comprising an energy beam transmittable base sheet and an adhesive layer formed on one side of the base sheet, said adhesive layer comprising a (meth)acrylate polymer, an epoxy resin, a photopolymerizable low molecular weight compound, a heat activatable potential curing agent for the epoxy resin and a photopolymerization initiator.

Thus, Komiyama et al. solely teach an adhesive being present as thin flat coating of a film or sheet, wherein said coating neither has a defined cross-sectional contour nor a cross sectional contour having any one of the shapes defined in claim 21. The same arguments as set

forth against Bonk et al. apply to the teaching of Komiyama et al. Thus, the present invention is not obvious over Komiyama et al., even if read in view of Woods.

**The Claim Rejection under 35 U.S.C. §103(a) in view of Polski et al.**

The disclosure of Polski et al. merely pertains to a diaper fastening tape, wherein a fastening tape tab is provided with an adhesive coating or layer. Thus, the adhesive is present as thin flat coating of a film or sheet, wherein said coating neither has a defined cross-sectional contour nor a cross sectional contour having any one of the shapes defined in claim 21. The same arguments as set forth against Bonk et al. apply to the teaching of Polski et al.

**Summary**

As discussed above, all cited references concern adhesive coatings of a film or sheet in order to provide an adhesive tape. In every cited reference, the adhesive is present in form of a thin and even layer or coating that will get its shape and cross-sectional contour from the form of the substrate it is coated on. Although an adhesive coating has a three-dimensional structure and may be bended to be present in arched form, the adhesive layers as such do not have a defined round, semicircular, oval, elliptical, triangular, quadrangular, polygonal or irregular cross-section, as required by independent claim 1, as amended herein.

Moreover, none of the references, except for Bonk et al. disclose that the adhesive may be present as adhesive material as such and without any substrate or support being coated with said adhesive. In contradistinction, the pressure-sensitive adhesive material or sealing material of the present invention does not comprise a support layer.



The presently claimed pressure-sensitive adhesive material or sealing material is present in form of strips, stripes or strings that have a substantial thickness which distinguishes the present invention from the adhesive layers within the prior art references.

By contrast, the cited prior art references neither teach nor indicate that a pressure-sensitive adhesive is manufactured in form of strings, strands or stripes that have a substantial thickness, i.e. having a round, semicircular, oval, elliptical, triangular, quadrangular, polygonal or irregular cross-section.

At least for the reasons described above, the Applicants respectfully submit that the combination of elements as set forth in independent claim 21 is not disclosed or made obvious by the prior art of record, including Bonk et al., Woods, Komiyama et al., Polski et al., and Lautenschlaeger et al.

Accordingly, reconsideration and withdrawal of these rejections are respectfully requested.

Independent claim 21 is in condition for allowance.

**Dependent Claims**

The Examiner will note that dependent claims 25 and 35 have been cancelled, because the subject matter has been incorporated into independent claim 21. In addition, independent claim 38 has been added.

All dependent claims are in condition for allowance due to their dependency from allowable independent claims, as well as for the additional novel limitations set forth therein.

*Application No. 10/799,724*  
*Amendment dated July 2, 2007*  
*Reply to Office Action of April 2, 2007*

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All claims of the present application are now in condition for allowance.

**CONCLUSION**

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, he is invited to telephone Carl T. Thomsen (Reg. No. 50,786) at (703) 208-4030 (direct line).

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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Date: July 2, 2007

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